



Seascape Assessment for the South Marine Plan Areas

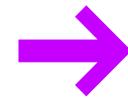
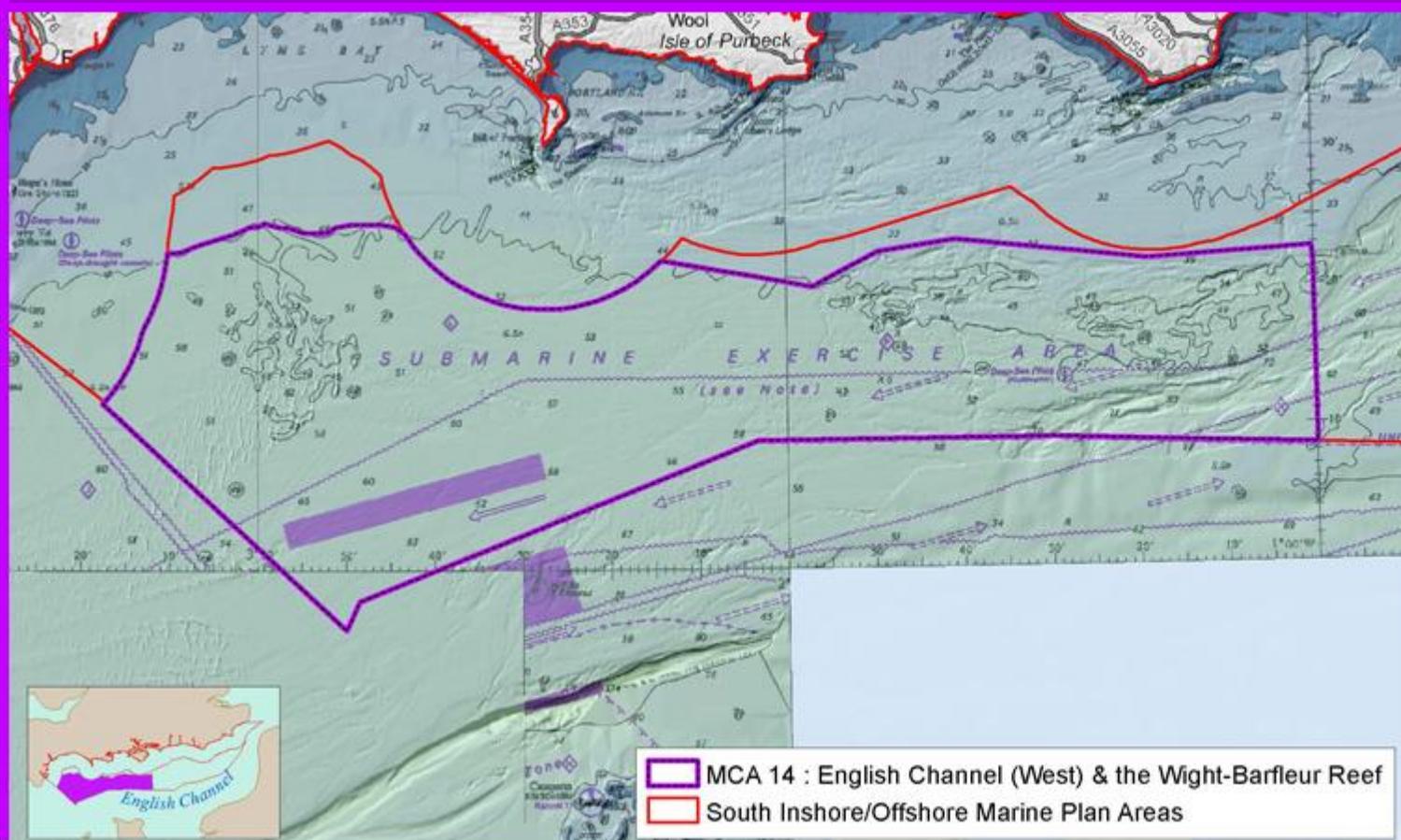
MCA 14: English Channel (West) and the Wight Barfleur Reef

Snapshot

Key Characteristics

Description

Visual Resource Mapping



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Location and boundaries

The Marine Character Area (MCA) covers the western part of the English Channel, from approximately 35 kilometres (19 nautical miles) offshore to a maximum of 85 kilometres (46 nautical miles) at the edge of the offshore Marine Plan Area and territorial limits. In the west, the inshore boundary broadly follows the 50m bathymetry contour, and much follows the inshore Marine Plan Area boundary. The eastern part of the MCA encompasses the whole of the Wight-Barfleur Reef candidate Special Area of Conservation (cSAC). The functional extent of the Channel stretches beyond English territorial waters into France, where the second shipping lane is located. It also extends eastwards into adjoining MCAs 13 and 12; collectively combining to cover the great majority of the English Channel. The shipping lane in English waters (in the south of the MCA) contains south moving traffic, and the two one-way lanes are separated by a Traffic Separation Zone.

Please note that the MCA boundaries represent broad zones of transition (not immediate breaks in character). Natural, visual, cultural and socio-economic relationships between adjacent MCAs play a key role in shaping overall character. Therefore individual MCAs should not be considered in isolation.

Overall character

This MCA has a rich physical and cultural heritage that is reflected in its character today. It includes part of one of the busiest shipping channels in the world; the organised movement of the many ships, cargo vessels and tankers through the channel evoking a strong sense of place. The Character Area is strongly associated with the defence of Britain over the centuries, including its role in the Anglo-Dutch Wars and both World Wars. The seabed includes the wrecks of sea-borne casualties from both World Wars as a legacy of the most recent conflicts. Despite the great influence of human activity over the centuries, beneath the seabed is a wealth of marine habitats, including internationally important high-energy rocky reefs and nursery/spawning grounds for a wide range of commercially fished benthic species.

Adjacent National Character Areas (NCAs)

N/A – this NCA does not include an adjacent coastline.

Adjacent nationally protected landscapes

Although not immediately adjacent to the MCA, the Dorset Area of Outstanding Natural Beauty (AONB) and Dartmoor National Park include land with views out to see towards this part of the English Channel.



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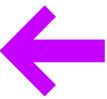
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- Broad east to south-west channel forming the western part of the wider English Channel (which stretches into French territorial waters). It reaches a maximum depth of approximately 82 metres.
- Contains a large part of the English Channel Outburst Flood Feature -providing evidence of the flood which created the channel separating England from mainland Europe.
- Mixed solid geology of the sea floor largely concealed by seabed and palaeovalley sediments, including sand, gravels, and mud - rich habitats for benthic species.
- The widest part of the English Channel between Lyme Bay and the Gulf of St Malo, resulting in high levels of exposure and breaking waves.
- Overfalls and strong tidal streams particularly associated with the Wight-Barfleur Reef in the east.
- Exposed rocky reef of the Wight-Barfleur candidate SAC, an extensive example of circalittoral bedrock reef (and the only known example in the region).
- Boulders and bedrock of the reef colonised by corals, sponges, tube worms, anenomes and sea squirts.
- Waters of the MCA providing nursery and spawning grounds for a range of fish species, including mackerel, species of ray, sandeel, sole, bass, cod and plaice.
- Strategic area for trade and military routes both along and across the English Channel since at least the medieval period.
- Much of this area was traversed by the D-Day invasion routes in 1994, which turned the tide of World War II in western Europe. The D-Day 'Pipeline under the Ocean' (PLUTO) carried fuel under the east of the MCA.
- The Channel's turbulent past reflected in a long history of wrecks of cargo and military vessels, especially from the two World Wars. Much of the area remains a Submarine Exercise Area
- The long-standing international importance of the Channel for trade also reflected in the origin of shipwrecks on the seabed – including Norway, New Zealand and Scotland.
- Forms part of the first IMO-approved traffic separation scheme in the world - maritime traffic follows a one way system, separated by a central traffic separation zone.
- Internationally important telecommunications cables passing through the seabed, including the Atlantic Crossing, which transports speech and data traffic between the USA and Europe.
- One of the busiest shipping channels in the world, with high volumes of large commercial freight/cargo vessels and tankers travelling through the southern part of the MCA.
- Important commercial and offshore recreational fishing grounds serving many fishing ports along the south coast, as well as France.
- A busy, dynamic area in the south defined by transport movement. The sight of maritime traffic on the horizon often features in views from the adjacent Lyme Bay (MCAs 1 and 2).
- Weather conditions subject to rapid change. Strong tides and the narrow topography can give rise to rough seas with steep breaking waves.
- Visibility is often poor, changing quickly to dense fog, even in strong or gale-force winds which can last for several days.



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For ease of reference, the following description text is arranged under three headings, considering the 'Natural', 'Cultural / social' and 'Aesthetic / perceptual' characteristics of the Marine Character Area. It should be noted, however, that all of these aspects combine and interact with each other to varying degrees to shape character.

Please note that this MCA description has close similarities to MCAs 13 and 12, which collectively cover the English Channel within the South marine plan area.

Natural influences

The English Channel is of geologically recent origins, having been dry land for most of the Pleistocene period. It is thought to have been created between 450,000 and 180,000 years ago by two catastrophic glacial lake outburst floods. These were caused by the breaching of the Weald–Artois anticline, a ridge that held back a large proglacial lake in the Doggerland region, now submerged under the North Sea. The flood would have lasted for several months, releasing as much as one million cubic metres of water per second. The flood carved a large bedrock-floored valley down the length of the Channel, leaving behind streamlined islands and longitudinal erosional grooves characteristic of catastrophic megaflood events. It also destroyed the isthmus that connected Britain to continental Europe.

The MCA occupies the widest part of the English Channel between Lyme Bay and the Gulf of St Malo. Its high levels of exposure mean that it is subject to some of the highest wind speeds in the region, as well as some of the strongest tidal currents – particularly in the east where waters pass over and through the Wight-Barfleur Reef, causing localised overfalls which can be a hazard to navigation.

The seafloor within this MCA has a varied geology in common with the corresponding coastline, including large areas of chalk (connected to famous terrestrial outcrops such as the Needles and Old Harry Rocks), sandstone and mudstone as well as smaller outcrops of limestone, particularly to the south of Lyme Bay and associated with the Wight-Barfleur Reef. These underlying rocks are frequently covered by Holocene deposits of sand, gravel and mud, but exposures create reefs which are valued maritime habitats. Bathymetry reaches its maximum depth in the south-east of the MCA at just over 80 metres, with the remainder characterised by a relatively uniform sea floor of approximately 60 metres; shallowing to approximately 45 metres along the northern edges of the Wight Barfleur Reef.

The reef is of international importance (put forward as a candidate SAC), occupying much of the eastern MCA (covering just under 140,000 hectares). The extensive area is an excellent example of circalittoral bedrock reef, and the only known such example in offshore waters within the region. The south-eastern area of the site contains part of a large palaeochannel known as the Northern Palaeovalley, which forms a major channel running roughly north-east/south-west across the English Channel. In this area the palaeovalley remains largely unfilled by sediment due to the strong currents in the area, and is characterised by a gravel, cobble and boulder substrate which in places forms stony reef. Throughout the area the biological communities are influenced by the strong tidal currents that operate in this part of the English Channel, including Ross corals and many types of sponges, from encrusting sponges to larger branching types. Tube worms, anemones and tunicates (sea squirts) are also common on the large boulders and bedrock. The area is likely to be visited by bottlenose dolphins and harbour porpoises as part of their larger ranges within the English Channel.

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The south-eastern part of the Wight Barfleur-Reef has recently been designated as a Marine Conservation Zone (MCZ), as an extension to the candidate SAC described above. It is associated with rich benthic species diversity and a foraging ground for various bird species, including the great cormorant and sandwich tern. The seas of the Character Area in general are nursery grounds for a number of fish species, such as mackerel, anglerfish, spurdog, thornback and spotted rays and whiting. In addition they are valued spawning grounds for sandeel, herring, sole, cod, bass and plaice.

Cultural / social influences

The Channel, which delayed human reoccupation of Great Britain for more than 100,000 years, has in historic times been both an easy entry for seafaring people and a key natural defence, halting invading armies while in conjunction with control of the North Sea allowing Britain to blockade the continent. The most significant failed invasion threats came when the Dutch and Belgian ports were held by a major continental power, e.g. from the Spanish Armada in 1588, Napoleon during the Napoleonic Wars, and Nazi Germany during World War II. Successful invasions include the Roman conquest of Britain (first by Julius Caesar in 55 BC, then in AD 43 under Emperor Claudius), and the Norman Conquest in 1066, while the concentration of harbours in the Western Channel on Britain's south coast made possible the largest invasion of all time, the Normandy Landings in 1944. Naval battles within the vicinity of this MCA include the Battle of Portland (1653), during the First Anglo-Dutch War. This was one of many battles which resulted in England gaining dominance over the Channel¹.

Wrecks littered across the seabed beneath the MCA provide evidence of the Channel's turbulent past as well as its long and continuing role as

an international trade route. These include the *Smyrna* (1888), a Scottish clipper which collided with a steamer en-route from the Isle of Wight to Sydney. 17 survivors from the collision were taken by the steamship involved in the accident to Southampton. The wreck is now a popular dive site. A number of cargo ships also met their fate in the area, often being attacked by torpedo during the First World War years. These include the *Rotorua* (1917), which was attacked on passage from Wellington, New Zealand to London with general cargo, and the Norwegian vessel *Nyasaland* (1918); scuttled by gunfire en-route from Cardiff to Le Havre laden with coal. War casualties include the *HMS Formidable*, which capsized and foundered off Portland Bill (MCA 3) in 1915 after being torpedoed while on military exercises, and *HMS Warrior II*, bombed by German aircraft in 1940. She was an escort yacht for British submarines operating in the area. The northern half of the MCA remains a Submarine Exercise Area, as defined on the charts.

Luxury goods such as wine have been imported from the continent via the wider English Channel to ports along the coast and to London since the Iron Age. Equally, goods produced in the region have been exported by sea via the channel for the same period of time, such as corn, salt, wool, seafood and even slaves (in the 1st century BC).

Today the Channel has traffic on both the UK-Europe and North Sea-Atlantic routes, and is the world's busiest seaway, with over 500 ships per day. Following an accident in January 1971 and subsequent series of collisions with wreckage in the following February, the Dover Traffic Separation System (TSS), the world's first radar controlled TSS, was set up by the International Maritime Organization. The scheme mandates that vessels travelling north must use the French side, travelling south along the English side. There is a separation zone

¹Summary taken from http://en.wikipedia.org/wiki/English_Channel

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between the two lanes. The English shipping lane passes through the southern part of this MCA.



Cargo ship

In addition to marine transport, the seabed is crossed by a number of telecommunications cables. These include the Atlantic Crossing cable which transports speech and data traffic between the USA and the Netherlands, as well as other cables linking England and France.

As well as the area's importance for marine transport and trade, the seabed provides a rich resource for scallop and oyster dredging, as well as lobster and crab potting. The waters are also valued commercial fishing grounds for species such as cod, whiting, beam, Dover sole, cuttlefish plaice and rays. Fleets from harbours along the south coast as well as from France and Belgium use the waters of the Channel (including this MCA) for fishing. Recreational angling and wreck diving also takes place within this MCA as important contributors to the regional economy.



Fishing Boat

Aesthetic and perceptual qualities

This is a marine area of contrasts; from the busy, dynamic shipping lanes in the south defined by frequent transport movements; to the more remote areas that surround it – where connections with human activity (including the land) are more removed. Perceptions of the area are also strongly influenced by sea and weather conditions – with visibility often poor and fog lasting for consecutive days, evoking a strong sense of remoteness despite the presence of dense marine traffic. Strong tides and overfalls associated with the underwater reefs, combined with strong south-westerly gales, can result in rough seas with high breaking waves, bringing an unforgiving element to the seascape.

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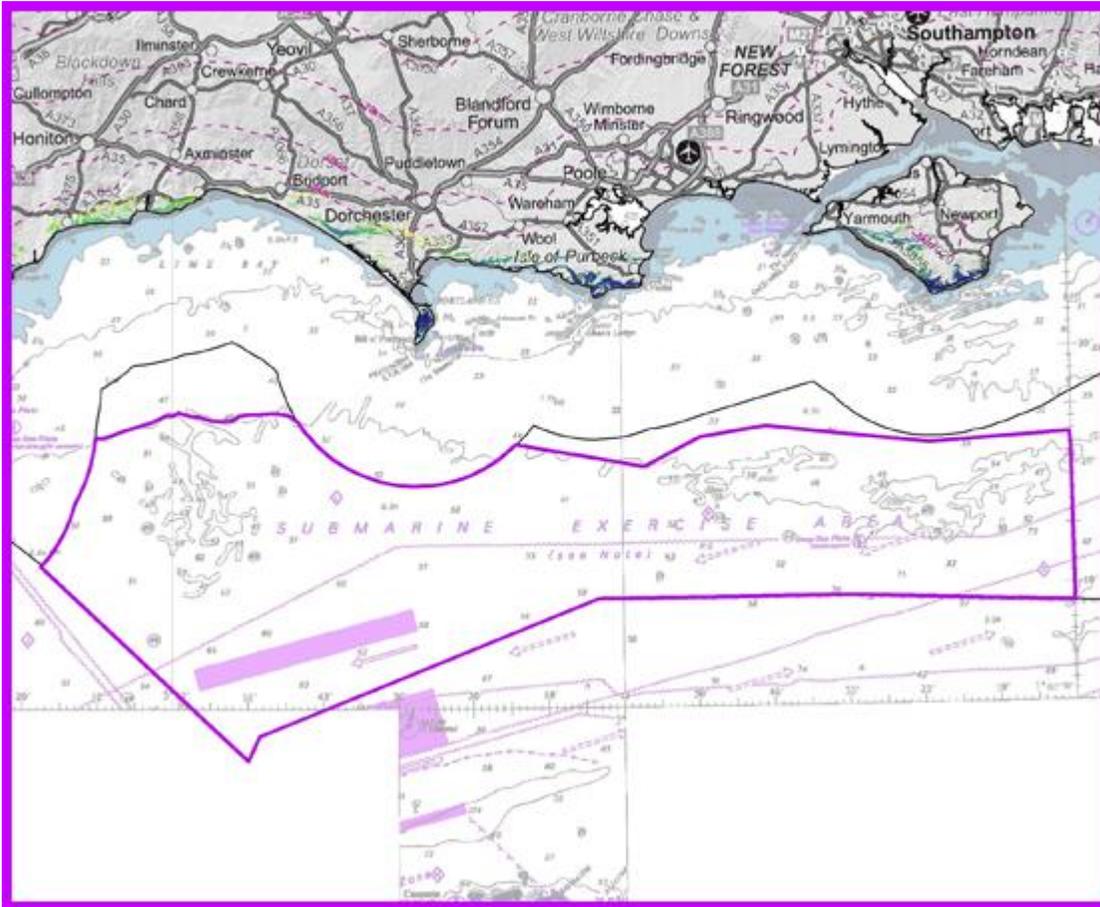
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Land with views of MCA 14



South Inshore/South Offshore marine plan areas

MCA 14: English Channel (West) and the Wight Barfleur Reef

Land with sea views (percentile)



- Extensive views of the MCA can be gained from the southern extent of the Isle of Wight, including Ventnor, Niton, Shorwell and Brighstone (within the Isle of Wight AONB and part covered by the Tennyson Heritage Coast).
- Extensive views are also afforded from the coastline between Strete and Berry Head (including areas within the South Devon AONB and Heritage Coast).
- In addition, views from Torquay, the Isle of Portland, and Lulworth Camp to Swanage (including areas within the Purbeck Heritage Coast, Dorset AONB and along the SW Coast Path) are extensive.
- Some views of the MCA can be obtained from elevated areas inland, including the Purbeck Ridge and Dorset Downs, as well as sections of AONB, Heritage Coast and World Heritage Site-designated coastline in Devon and Dorset.

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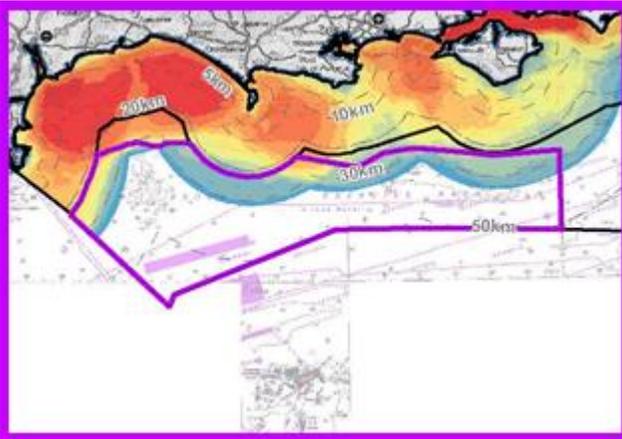
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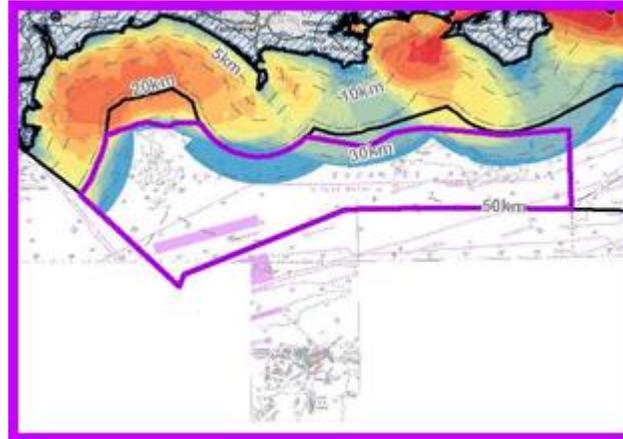
Visual Resource Mapping

Visibility of sea from land

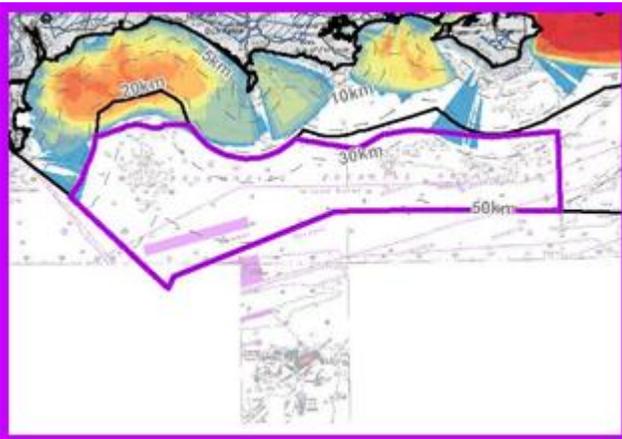
Relative visibility of the sea surface from viewers on land



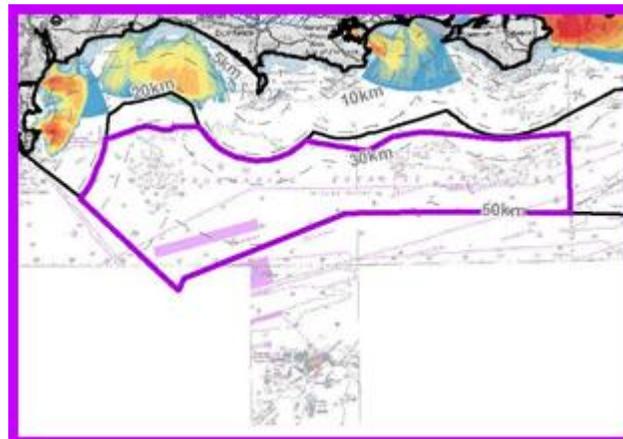
0-1km from the High Water Mark



1-5km from the High Water Mark



5-10km from the High Water Mark



10-20km from the High Water Mark

South Inshore/South Offshore marine plan areas

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Location of viewers

1 to 10	11 to 20	21 to 30	31 to 40	41 to 50
51 to 60	61 to 70	71 to 80	81 to 90	91 to 100

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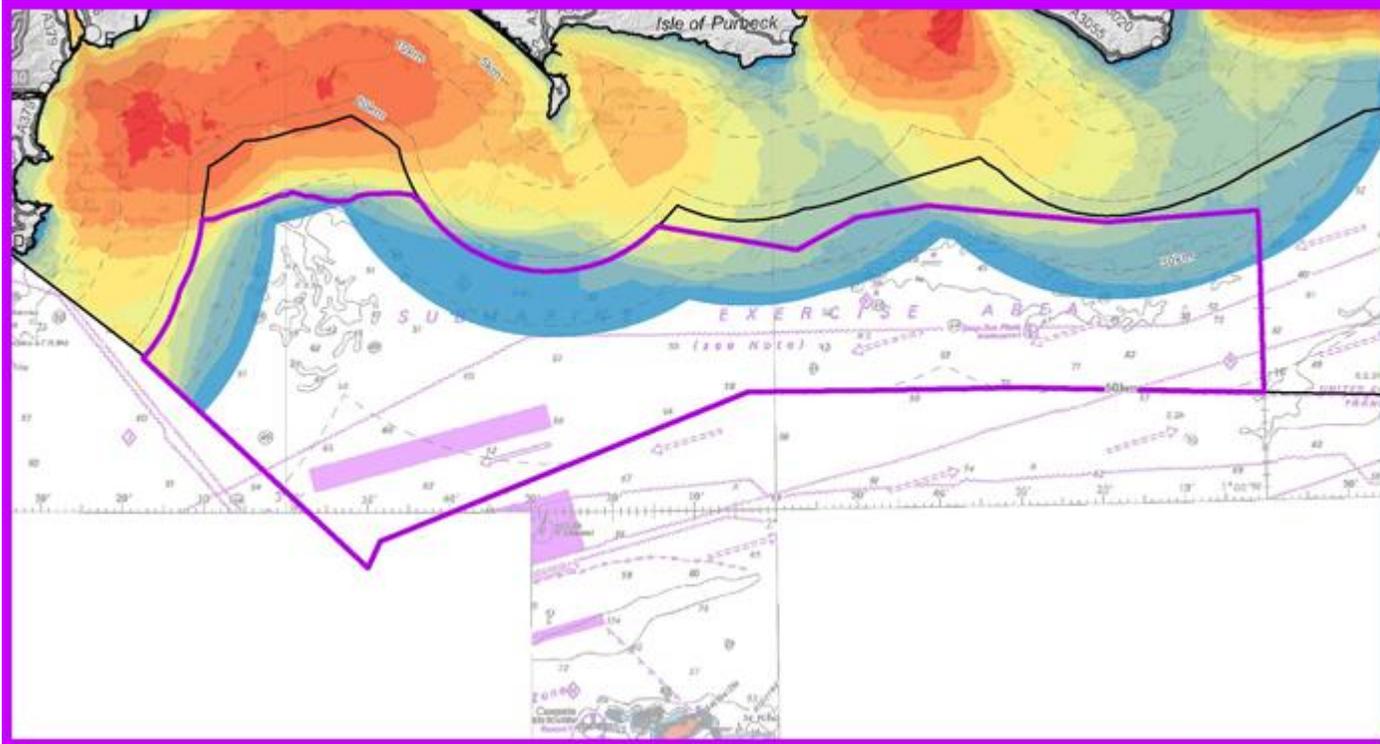
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Visibility of sea from land

Relative visibility of the sea surface from viewers on land



- The majority of this MCA is not visible from the land due to the influence of the curvature of the earth over these long distances.
- Visibility of the northern edge of the MCA will be influenced by atmospheric conditions and can expect to be obscured for much of the year.

Up to 20km from the High Water Mark

South Inshore/South Offshore marine plan areas

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Visibility of sea from land (percentile)

